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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,018	02/22/2007	Frans A. Audenaert	59362US004	4403
32692 7590 12/30/2009 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER				
TUROCZY, DAVID P				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
12/30/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
LegalDocketing@mmm.com

Office Action Summary

Application No.

10/579,018

Applicant(s)

AUDENAERT ET AL.

Examiner

DAVID TUROCY

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (FTO/S3/DP)
Paper No(s)/Mail Date 1/18/08, 9/18/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4, 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 550 915, hereinafter EP 915.

EP 915 discloses a composition comprising water, fluorochemical compound, cationic surfactant and a colloidal inorganic particle (entire reference).

Claims 2 and 4: EP 915 discloses hydrophobically modified silica particles emulsified with a cationic surfactant, which is explicitly taught in present specification as meeting the cationic requirement.

Claim 6: EP 915 discloses a solid content within the range as claimed (examples).

Claim 7: EP 915 discloses ammonium surfactant (page 3).

3. Claims 1-10, 12, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3940359 by Chambers, hereafter Chambers.

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Chambers discloses a composition comprising water, fluorochemical compound, cationic surfactant and a colloidal inorganic particle (entire reference).

Claims 2 and 4: Chambers discloses positive charged colloidal silica (column 2, lines 60-65).

Claim 3: Chambers discloses LUDOX, which includes a particle size as claimed as evidenced by US Patent 5608003, column 4.

Claim 5: Chambers discloses proportion in the range as claimed (column 1, lines 30-35 4 parts silica to 16 parts fluorochemical.)

Claim 6: Chambers discloses a solid content within the range as claimed (column 2, lines 42-44).

Claim 7: Chambers discloses ammonium surfactant (example 8.

Claim 8: Chambers discloses polymers including monomers that meet the limitations of this claim (Column 1-3, examples).

Claim 9: Chambers discloses less than 7 pH (column 1, lines 40-41).

Claims 10 and 13: Chambers discloses coating fabrics, which is a fibrous substrate as well as textiles (abstract, column 3, lines 15-28).

Claim 12: Chambers discloses imparting water repellency to a fibrous substrate using an amount of fluorochemical and therefore this meets the limitations of the claim as written.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers.

The examiner maintains the position as above, alternatively, it would have been obvious to have combined the components as claimed because Chambers discloses a composition may comprise a cationic surfactant in combination with a fluorocompound and a colloidal silica and therefore using such as a treating composition would have led to predictable and successful results.

Claim 3: As for the size of the colloidal particles, this is clearly a result effective variable, wherein the size of the particles in the dispersion directly effect the coating properties and therefore the determination of the appropriate size would have been obvious to one of ordinary skill in the art through routine experimentation. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have determined the appropriate size, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 5: As for the ratio of components in the composition, this is clearly a result effective variable, wherein the ratio directly effect the coating properties and therefore the determination of the appropriate ratio would have been obvious to one of ordinary skill in the art through routine experimentation. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have determined the appropriate ratio of colloidal silica and fluorochemical, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers and further in view of US Patent 5608003 by Zhu, hereafter Zhu.

As for the size of the colloidal particles, the examiner maintains the position as above, but also cites Zhu which explicitly discloses colloidal silica with a fluorochemical for coatings wherein the silica has a size within the range as claimed. Therefore, taking the references collectively it would have been obvious to one of ordinary skill in the art to have used the size of silica as taught by Zhu with a reasonable expectation of success in the process as taught by Chambers.

7. Claim 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers in view of US Patent 6525127 by Jariwala et al., hereafter Jariwala.

Chambers is applied here as applied above, however, fails to disclose a bath and rollers as claimed. However, Jariwala teaching of a similar method of

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depositing a fluorochemical onto a fibrous substrate discloses immersion in a bath and thereafter pass through a roller to provide appropriate coating (column 12, lines 30-38) and therefore taking the references collectively, modification of Chambers, to use the immersion bath and rollers as taught by Jariwala would have led to predictable and successful results because Jariwala disclosing a fluorochemical composition is known to be deposited by such a technique.

Conclusion

8. US Patent 5350795 and US Patent 5370919 each discloses fluorochemical with silica colloid applied to a fabric to provide water repellency.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID TUROCY whose telephone number is (571)272-2940. The examiner can normally be reached on Monday, Wednesday and Friday from 7 a.m. - 6 p.m., Tuesday and Thursdays 7-10 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Turocy/
Examiner, Art Unit 1792